AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application.

Listing of Claims:

Claim 1-38 (Cancelled)

Claim 39 (Currently Amended):   A cross-bar switch comprising:

a set of input ports to receive data packets;

a set of sink ports in communication with said set of input ports to accept and forward said data packets, wherein a first sink port in said set of sink ports includes:

a communication link interface including a Retry input, wherein said Retry input is programmable to operate in a Hold-off mode and a Retry Mode,

wherein in said Retry Mode said first sink port responds to a signal on said Retry input by performing the steps of:

aborting transmission of a first data packet;

waiting a predetermined period of time; and

transmitting said first data packet after waiting said predetermined period of time, and

wherein in the Hold-off mode said first sink port responds to said signal on said Retry input by discontinuing transmission on said communications link interface after transmission of a data packet is complete, until said signal is altered.

Claim 40 (Cancelled).

Claim 41 (Currently Amended):   The cross-bar switch of claim 3940, further including a programmable Retry Mode register, wherein a value in said programmable Retry Mode register controls the an operating mode of said Retry input.

Claim 42 (Previously Presented): The cross-bar switch of claim 39, further including a Retry Time register identifying said predetermined period of time.

Claim 43 (Previously Presented): The cross-bar switch of claim 39, wherein each sink port in said set of sink ports includes:

a respective communication link interface including a Retry input, wherein each said sink port responds to a signal on said Retry input by performing the steps of:

aborting transmission of a third data packet;

waiting a predetermined period of time; and

transmitting said third data packet after waiting said predetermined period of time.

Claim 44 (Previously Presented): The cross-bar switch of claim 39, further including:

a set of data rings in communication with said set of input ports and said set of sink ports.

Claim 45 (Previously Presented): The cross-bar switch of claim 44, wherein said set of data rings couples each sink port in said set of sink ports to each input port in said set of input ports.

Claim 46 (Currently Amended): A ~~The~~ cross-bar switch ~~of claim 45,~~ comprising:

a set of input ports to receive data packets;

a set of sink ports in communication with said set of input ports to accept and forward said data packets, wherein a first sink port in said set of sink ports includes a communication link interface including a Retry input, wherein said first sink port ~~is~~ responds to a signal on said Retry input by aborting transmission of a first data packet, waiting a predetermined period of time, and transmitting said first data packet after waiting said predetermined period of time; and

a set of data rings in communication with said set of input ports and said set of sink ports,

wherein said set of data rings couples each sink port in said set of sink ports to each input port in said set of input ports, and

wherein each sink port in said set of sink ports snoops data packets on each data ring in said set of data rings.

Claim 47 (Previously Presented):   The cross-bar switch of claim 46, wherein said first sink port snoops data packets on each data ring in said set of data rings to determine whether said data packets are targeted to a destination supported by said first sink port.

Claim 48 (Currently Amended):   ~~The cross-bar switch of claim 44,~~

A cross-bar switch comprising:

a set of input ports to receive data packets;

a set of sink ports in communication with said set of input ports to accept and forward said data packets, wherein a first sink port in said set of sink ports includes a communication link interface including a Retry input, wherein said first sink port ~~is~~ responds to a signal on said Retry input by aborting transmission of a first data packet, waiting a predetermined period of time, and transmitting said first data packet after waiting said predetermined period of time; and

a set of data rings in communication with said set of input ports and said set of sink ports, wherein said set of data rings couples each sink port in said set of sink ports to each input port in said set of input ports, and

wherein said first sink port snoops data packets on each data ring in said set of data rings and determine whether to accept said first data packet based on a set of criteria, wherein said set of criteria includes:

said first sink port having sufficient storage space for storing said first data packet,

said first sink port supporting a destination targeted by said first data packet, and

a total number of packets being received by said first sink port not exceeding a predetermined number of packets.

Claim 49 (Previously Presented):   The cross-bar switch of claim 44, wherein said first sink port includes:

a ring interface coupled to said set of data rings to receive data from data packets;

a storage buffer coupled to said ring interface to receive and store said data; and

an output port including said communications link interface, wherein said output port is coupled to said storage buffer to receive said data from said storage buffer and transmit said data on said communications link interface.

Claim 50 (Currently Amended):   A sink port that accepts and forwards data packets, said sink port comprising:

a storage buffer; and

an output port including a communications link interface, wherein said output port is coupled to said storage buffer to receive data from said storage buffer and transmit said data on said communications link interface,

wherein said communications link interface includes a Retry input programmable to operate in a Retry mode and a Hold-off Mode,

wherein in said Retry Mode said output port responds to a signal on said Retry input by performing the steps of:

aborting transmission of a first data packet;

waiting a predetermined period of time; and

transmitting said first data packet after waiting said predetermined period of time, and

wherein in said Hold-off Mode said discontinuing transmission on said communications link interface after transmission of a data packet is complete, until said signal is altered.

Claim 51 (Cancelled).

Claim 52 (Currently Amended): The sink port of claim 50 ~~51~~, further including a programmable Retry Mode register, wherein a value in said Retry Mode register controls ~~an~~ the operating mode of said Retry input.

Claim 53 (Previously Presented): The sink port of claim 50, further including a Retry Time register identifying said predetermined period of time.

Claim 54 (Currently Amended): ~~The sink port of claim 50,~~

A sink port that accepts and forwards data packets, said sink port comprising:

a storage buffer; and

an output port including a communications link interface, wherein said output port is coupled to said storage buffer to receive data from said storage buffer and transmit said data on said communications link interface,

wherein said communications link interface includes a Retry input,

wherein said output port responds to a signal on said Retry input by performing the steps of aborting transmission of a first data packet; waiting a predetermined period of time; and transmitting said first data packet after waiting said predetermined period of time, and

wherein said sink port snoops data packets in a set of data rings.

Claim 55 (Previously Presented): The sink port of claim 54, wherein said sink port snoops data packets on each data ring in said set of data rings to determine whether said data packets are targeted to a destination supported by said sink port.

Claim 56 (Previously Presented): The sink port of claim 54, wherein said sink port snoops data packets on each data ring in said set of data rings and determine whether to accept said first data packet based on a set of criteria, wherein said set of criteria includes:

said sink port having sufficient storage space for storing said first data packet,

said sink port supporting a destination targeted by said first data packet, and

a total number of packets being received by said sink port not exceeding a predetermined number of packets.

Claim 57 (Currently Amended): A system comprising:

a first cross-bar switch including:

a first set of input ports to receive data packets,

a first set of sink ports in communication with said first set of input ports to accept and forward said data packets, wherein a first sink port in said first set of sink ports includes:

a first communications link interface including a Retry input; and

a second cross-bar switch including:

a second set of input ports to receive data packets, wherein a first input port in said second set of input ports includes:

a second communications link interface including a first output in communication with said Retry input,

wherein said first sink port is programmable to operate in a Retry Mode and a Hold-off mode,

wherein in said Retry Mode said first sink port responds to a signal on said Retry input from said first output by performing the steps of:

aborting transmission of a first data packet;

waiting a predetermined period of time; and

transmitting said first data packet after waiting said predetermined period of time, and

wherein in said Hold-off Mode said sink port discontinuing transmission on said communications link interface after transmission of a data packet is complete, until said signal is altered.

Claim 58 (Cancelled).

Claim 59 (Currently Amended): The system of claim 5857, wherein said first cross-bar switch further includes a programmable Retry Mode register, wherein a value in said Retry Mode register controls an the operating mode of said Retry input.

Claim 60 (Previously Presented):   The system of claim 57, wherein said first cross-bar switch further includes a Retry Time register identifying said predetermined period of time.

Claim 61 (Previously Presented):   The system of claim 57, wherein:

said first communications link interface includes a data output, and

said second communications link interface includes a data input in communication with the data output.

Claim 62 (Previously Presented):   The system of claim 57, wherein said first output in said second communications link interface is a collision output.